# PSYCHOLOGICAL NOTES.

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## *Concerning some Peculiarities of the Sense of Touch.*

By G. Sergi, Rome, Italy (Zeitschrift f. Psy. und Phys. des Sinnesorgane). The author first refers to the experiments by Bloch to determine the duration of the sensations of touch; first in 1875, later in 1877. Sergi desired to ascertain the acuteness of the skin's power for discriminating successive stimulations. In other words, how much of an interval must there be between successive touch stimulations to prevent their being fused into one continuous sensation. As apparatus, he used a series of six of König's tuning forks, set into vibration electrically, capable of 30, 100, 250, 435, 500 and 1,000 vibrations respectively. These forks were applied directly to various portions of the dermal area. After a large number of careful tests, Sergi reaches some interesting conclusions:

1. The different portions of the dermal surface are by no means *equally* capable of perceiving touch stimulations of weak intensity. The most sensitive portions of the skin are the tips of the fingers on the volar side, where the weakest stimulations are distinctly perceived.
2. The minimum of energy of the stimulus (or threshold) varies with different portions of the skin and with successive isochronous stimuli, as those of the tuning fork, the continuous sensation which proceeds is not the result of fusion of the impressions, but the result of the imperceivability of weak sense impressions.
3. The mucuous membrane of the glands experiences no sensations of a purely *tactile* character.
4. Two conditions must ever be borne in mind—conditions which really complement each other: (*a*) The intensity of the stimulus; (*b*) The special sensibility of the stimulated organ. Helmholtz demonstrates the truth of these with reference to sensations of light.

The experiments of Sergi, in a general way, substantiate the earlier ones of Weber, Rumpf and Schwaner.

## *Influence of Horizontal and Vertical Positions on the Cerebral Functions.*

By Sicard de Plauzoles (Annales de Psych., 1893). This writer lays stress on the function of the blood in maintaining the activity of the brain. A continuous circulation of the blood is a necessary condition, he says, for the regular action of the cerebral cells. Suspend momentarily the circulation in the encephalon and the phenomena of nervous activity is interrupted. The circulation of the blood is affected by the different positions of the body, the horizontal position accelerating and the upright inhibiting it. The carotid and vertebral arteries at the base of the brain anastomose in the hexagon of Willis, and in an erect position this latter rests on them, pressing them down upon the base of the skull, thus diminishing the flow of blood over the cortex. The brain-mass, being smaller than its bony covering, is capable of slight changes of position, according to the posture of the individual. Where stretched out horizontally, the cerebral substance loses its contact with the frontal wall, and, in standing, the upper portions rest on the lower part of the brain.

When, after lying down for some time, one suddenly rises, the brain passes from a congested to a relatively anæmic state and vertigo results. The modifications of the brain circulation, which cause vertigo, can be produced in two opposite ways—by congestion and by anæmia.

Delirium may be due to these opposed conditions, and, indeed, all phenomena of cerebral origin—as convulsions, insomnia, etc.,—may be caused by two contrary circulatory conditions.

Congestive vertigo increases in a declined position of the head; anæmical vertigo in the erect position. Furthermore, vertigo is often caused by sudden changes of attitude.

Normally, man passes a certain number of hours in the vertical position and in the horizontal position, and in the case of a healthy man it is difficult to perceive any very appreciable modifications of the play of thought following these changes of the cerebral position; but, in the case of persons mentally diseased, S. has found marked modifications, corresponding to these two periods.

One patient suffered for several weeks with insomnia. Before rising he was delirious, had continual feelings of faintness, and thought he was about to die, the violence of his sensations being lightened relatively to the amount of sleep he had obtained during the night. The temple pulse was more violent than when erect, the two not acting simultaneously, and the left more feeble than the right. During the day the patient improved, but in the afternoon, on extending himself in a hammock, the delirious symptoms returned.

Other cases are also cited. He sums up his statements thus:

Mental disturbance is greatest (1) after a long horizontal condition—in the morning for example; (2) after a long vertical condition, in the evening, the intermediate hours being the least disturbed.

### *Insanity Communicated from Man to Animals.*

By Ch. Féré (Soc. de Biologie, 1893). This article speaks of cases in which dogs living in intimate relations with neuropaths, especially among low classes of humanity, have contracted their morbid activities. This is only a peculiar form of what has been noted by others, in the communication of insanity from one individual to another.

### *Mental Alienation Resulting from Surgical Operations.*

(April number, *Journal of Mental Science.*) The first case cited was that of a woman who had had two dangerous operations performed within two weeks. Her convalescence was marked by attacks of hysteria, one occurring two months after the completion of the operations, being accompanied by inability to control her actions, alteration of her affections, complaints for the slightest causes. These symptoms disappeared as the patient improved.

The second case was that of a child of twelve years, on whose knee an operation was performed, ether being used as an anæsthetic. Eight days later a mild form of insanity appeared. During the day he slept lightly; at night he was restless and the temperature higher, though the wound had remained the same. The hair became dry and hard, the child was sullen, and the natural affections altered. He grew better gradually, and recovered entirely from the trouble.

The third case, observed by Dr. Dent, was a woman of sixty, whose leg was amputated, ether being administered. Eleven days later melancholia manifested itself, followed by a gradual failing, culminating in senile insanity.